

Rearranging and Grade 9 Algebra — Consolidation

Practice questions

- 1 Make x the subject of $4x - p = qx + 7$
- 2 Make x the subject of $y = \frac{5x-2}{x+3}$
- 3 Make h the subject of $r = \sqrt{\frac{V}{\pi h}}$
- 4 Make b the subject of $a = \frac{b+c}{b-c}$
- 5 Find $f^{-1}(x)$ when $f(x) = \frac{4x-1}{x+2}$
- 6 Solve $\frac{3}{x-2} - \frac{1}{x+1} = 1$
Give your answers in surd form.
- 7 Find the coordinates of the points where the line $y = x + 3$ meets the circle $x^2 + y^2 = 29$.
- 8 A bag has n counters. 3 are green. Two counters are taken at random without replacement. The probability that both are green is $\frac{1}{12}$.
(a) Show that $n^2 - n - 72 = 0$
(b) Find n .

Exam-style questions

- 1 $s = ut + \frac{1}{2}at^2$
(a) Make a the subject of the formula.
(b) Find a when $s = 50$, $u = 4$ and $t = 5$.
- 2 Solve $\frac{5}{x+2} + \frac{3}{x-1} = 2$
Give your answers correct to 2 decimal places.
- 3 The line $y = x - 1$ meets the circle $x^2 + y^2 = 25$ at the points A and B .
(a) Find the coordinates of A and B .
(b) Show that the length of AB is $7\sqrt{2}$.